

A Square-root Raised Cosine Ultra-wideband Communications System

ABSTRACT OF THE DISCLOSURE

System for ultra-wideband communications providing high data rates over an extended operating range in the presence of interferers. A preferred embodiment comprises an ultra-wideband (UWB) device that makes use of a portion of the UWB frequency range to help provide good performance in the presence of interferers. Additionally, since only a portion of the UWB frequency range is used, multiple devices can simultaneously transmit and receive by using different portions of the UWB frequency range.